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09/828,481	04/06/2001	Anthony William Jorgenson	KES-00-002	6775

7590 10/03/2003  
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EXAMINER

KNOLL, CLIFFORD H

ART UNIT	PAPER NUMBER
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2189

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Page

# Office Action Summary

Application No.

09/828,481

Applicant(s)

JORGENSEN, ANTHONY  
WILLIAM

Examiner

Clifford H Knoll

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

Applicant's address and citizenship (page 1, lines 5-10) should not be part of the specification. Appropriate correction is required.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a) because they fail to show structural details directed to the claimed invention as described in the specification (e.g., Applicant's brief description of drawings, in particular Figure 5A, 6, and 7). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

New corrected drawings are required in this application because the reproduction submitted has darkened block elements (e.g., 5A, 6, 7) where structure has been obscured, and identification of item elements cannot be made. Because these are elements of the claimed invention their identification and structural relationships should be clear.

Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no

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longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23, 24, 26, and 28 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 23, the method as claimed recites the apparatus limitation of "a hard wire connection."

In claim 24, the method as claimed recites the limitation of "controller is one of...." The limitation is unclear in the context of a method claim.

Similarly, the apparatus elements of claim 26 ("one inch to seven feet"), and claim 28 ("optical signals include...") apparently recite a structural limitation in a presumed method claim. If the claim of a method is the intent, elements should refer to steps, or their equivalents.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

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Claims 23, 24, 26, and 28 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The instant claims appear to recite both method steps and apparatus limitation.

"[A] claim which is intended to embrace both product or machine and process is precluded by language of 35 USC 101, which sets forth statutory classes of invention in alternative only, and is also invalid under 35 USC 112, second paragraph, since claim which purports to be both machine and process is ambiguous and therefore does not particularly point out and distinctly claim subject matter of invention." (See *Ex parte Lyell* 17 USPQ2d 1548)

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-33 rejected under 35 U.S.C. 102(e) as being anticipated by Shideler (US 6625163).

Regarding claims 1 and 16, Shideler discloses a controller and its method, and a plurality of connections with each first end coupled to a controller (e.g.,

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col.8, lines 37-42) and a plurality of peripheral cards coupled to a second end (e.g., col.8, lines 37-42).

Regarding claims 2 and 17, Shideler also discloses peripheral cards including transmit and collision connection and each are connected to a separate second end of said respective dedicated one of said plurality of connections (e.g., col.7, lines 39-45).

Regarding claims 3 and 18, Shideler also discloses a transmit lead and collision lead, each said lead separately coupled to said second end of said respective dedicated one of said plurality of connections (e.g., col.7, lines 39-45).

Regarding claims 4 and 19, Shideler also discloses a logic device (e.g., col.7, line 16).

Regarding claims 6 and 21, Shideler further discloses the logic device having a plurality of drivers each dedicated to receive signals from a particular peripheral card (e.g., col.7, lines 8-11), the controller is configured to individually disable one or more of said plurality of drivers (e.g., col.1, lines 60-67, col.7, lines 43-45).

Regarding claims 7 and 22, Shideler further discloses a control unit and the method of generating a control signal (e.g., col.7, lines 8-9), a plurality of OR gates (e.g., col.7, line 9), and performing an AND operation to outputs of said OR gates and providing output to said controller (e.g., Figure 2, item 203).

Regarding claims 8 and 23, Shideler also discloses a hard wire connection (e.g., col.3, lines 23-26).

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Regarding claims 9 and 24, Shideler also discloses one of a MPC 860, MPC 850, and MPC8260 processor (e.g., col.8, lines 43-49)

Regarding claims 11 and 26, Shideler also discloses separation by a distance ranging from one inch to seven feet (e.g., col. 3, lines 9-16).

Regarding claims 15 and 30, Shideler also discloses a bus that may be configured to support half duplex mode and full duplex mode communication (e.g., col.4, lines 30-39).

Regarding claim 31, Shideler discloses detecting a signal communication failure on a data bus (e.g., col.7, lines 53-54), performing a control bus integrity check and isolating the origin of said signal communication failure to a particular peripheral device (e.g., col.7, lines 26-27, col.13, lines 37-44).

Regarding claim 33, Shideler also discloses detecting a combined bus signal (e.g., col. 7, lines 9-10) and determining whether a transmit signal from a peripheral device is continuously low (col.7, line 7).

Claim 32 rejected under 35 U.S.C. 102(e) as being anticipated by Wight (US 6219353).

Wight discloses detecting a signal communication failure including lack of response to a system controller request or a background poll (col.7, lines 11-14), performing a control bus integrity check (col.7, lines 11-12), and isolating the origin of the failure to a particular peripheral device (col.7, lines 14-17).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Shideler in view of Webber (US 6381213).

Regarding claims 5 and 20, Shideler discloses a logic device. Shideler does not expressly disclose a particular implementation of the logic device as being an FPGA; however, this is a widely known means of implementing a logic device, as exemplified by Webber.

Webber discloses implementing logic for a communications interface using an FPGA (col.11, lines 26-29). It would be obvious to combine Webber with Shideler because the Webber teaches the common implementation detail of using an FPGA to implement a logic device for a bus controller, such as that of Shideler. Therefore it would be obvious to one of ordinary skill in the art to combine Webber with Shideler at the time the invention was made.

Claims 10, 14, 25, and 29 rejected under 35 U.S.C. 103(a) as being unpatentable over Shideler in view of AMD's benchmarking data sheet ("AM186 CC/CH microcontroller HDLC benchmarking data").



Regarding claims 10, 14, 25, and 29, Shideler also claims the use of various embodiments of HDLC protocol (e.g., col.2, lines 51-60). Shideler does not expressly mention the particular data rate that is recited; however, it is a manifestly common feature of practicing the HDLC protocol to operate at a broad range of data rates, as exemplified by AMD's benchmarking data sheet. AMD discloses a broad range of data rates, from the standard T1/E1 data rate (2.048 Mbps), through 3 Mbps to 7 Mbps, and beyond and teaches their application regarding tradeoffs in buffer size and computational load. It would be obvious to one of ordinary skill in the art to operate Shideler's invention at a frequency range between approximately 3 MHz to 6 MHz, or at 6 MHz at the time the invention was made.

Claims 12-13, 27-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Shideler in view of Brolin (US 6359859).

Shideler specifically mentions a wide variety of communications networks, but he does not explicitly express the particular embodiment of an optical data communications network. However, this is quite standard in communications network controllers as exemplified by Brolin.

Regarding claims 12 and 27, Shideler discloses the use of his invention in a "wide variety of standard WANs, LANs, and proprietary networks" with "many physical interface options" (e.g., col.3, lines 10-17). Brolin discloses an optical communications network each configured to receive and transmit electrical and optical signals (col.1, lines 16-21).

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Regarding claims 13 and 28, Brolin also discloses one of OC-3, OC-12, and OC-48, and one of STS-3, STS-12, and STS-48 (col.1, lines 36-47).

It would be obvious to combine Brolin with Shideler because the OC-N and STS-N signal series are standard protocols in used with controllers, such as the controller of Shideler. Therefore it would be obvious to one of ordinary skill in the art to combine Brolin with Shideler at the time the invention was made.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Regis (US 2002/0184422) discloses a serial arbitration line. Hunt (US 4409592) discloses a different example from Wight of fault isolation on a serial bus.

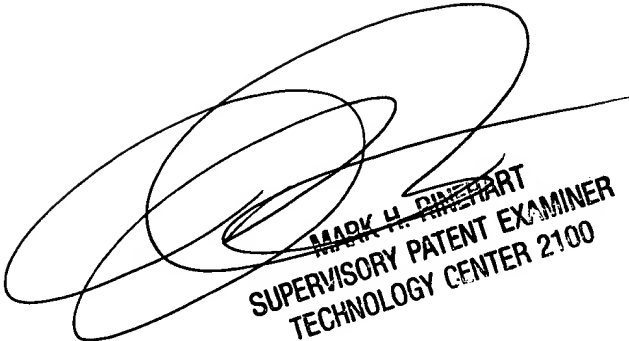
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clifford H Knoll whose telephone number is 703-305-8656. The examiner can normally be reached on M-F 0630-1500.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark H Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2100.

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